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IS 12412 (1988): Setting iron for two-men cross cut saws  
[PGD 6: Earth, Metal And Wood Working Hand Tools]

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“Knowledge is such a treasure which cannot be stolen”





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Indian Standard

## SPECIFICATION FOR SETTING IRON FOR TWO-MEN CROSS CUT SAWs

**1. Scope** — Specifies the material, dimensions and other requirements for setting iron used for setting of two-men cross cut saws, according to IS : 12127-1987 'Specification for two-men cross cut saws'.

**2. Material** — Shall be made of suitable steel in hardened and tempered conditions meeting the requirements given in 2.1. Suitable composition of the steel is:

Carbon	0.75 to 0.90 percent
Silicon	0.35 percent, Max
Manganese	0.65 to 0.90 percent
Sulphur	0.05 percent, Max
Phosphorus	0.05 percent, Max

**2.1 Hardness** — Shall be  $49 \pm 2$  HRC

**3. Shape and Dimensions** — The shape and dimensions of setting iron shall be as given in Fig. 1.

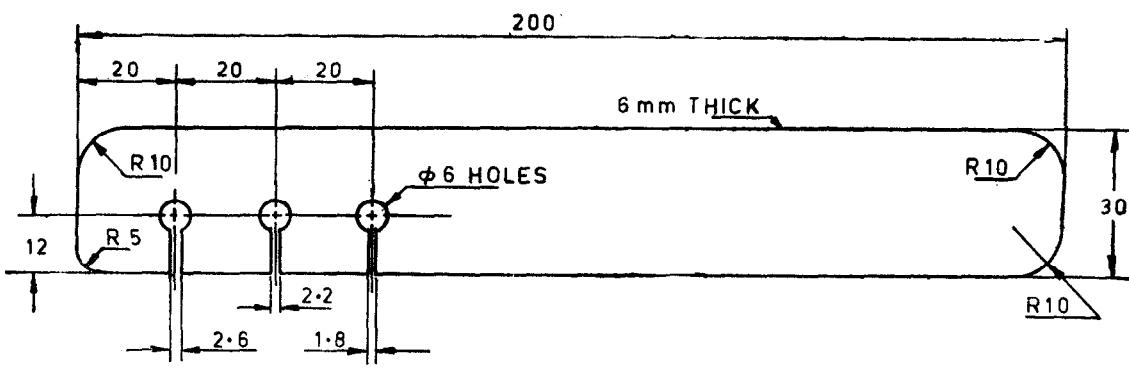


FIG. 1 SETTING IRON FOR TWO-MEN CROSS CUT SAWs

**3.1 Tolerances** on the dimensions shall be 'very coarse class' specified in IS : 2102 ( Part 1 )-1980 'General tolerances for dimensions and form and position : Part 1 General tolerances for linear and angular dimensions ( second revision )', except for the slots for which these shall be  $\pm 0.1$  mm.

**4. Workmanship and Finish** — The setting iron shall be free from burrs, pits, sharp edges, cracks, etc, and shall be finished smooth.

**5. Designation** — The setting iron shall be designated by its name and the number of this Indian Standard as follows:

Setting iron IS : 12412.

**6. Marking** — Each setting iron shall be legibly and indelibly stamped with the manufacturer's name or trade-mark, if any, and the batch or code number.

**6.1 Standard Marking** — Details available with the Bureau of Indian Standards.

**7. Sampling** — Unless otherwise agreed to between the manufacturer and the purchaser, the sampling plan and criteria for conformity shall be as given in Appendix A.

## APPENDIX A

## (Clause 7)

## SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

## A-1. Scale of Sampling

**A-1.1 Lot** — In any consignment, all the setting irons of the same nominal size manufactured under similar conditions of manufacture shall be grouped together to constitute a lot.

**A-1.2** For ascertaining the conformity of the lot to the requirements of this specification, tests shall be carried out on the setting irons selected from each lot separately. The number of setting irons to be selected at random from a lot shall be in accordance with col 1 and 2 of Table 1. To ensure the randomness of selection, the procedure as laid down in IS : 4905-1968 'Methods for random sampling' may be followed.

TABLE 1 SAMPLING SIZE AND PERMISSIBLE NUMBER OF DEFECTIVES

Lot Size (1)	Sample Size (2)	Permissible Number of Detectives (3)
Up to 50	5	0
51 to 150	8	0
151 to 300	13	1
301 to 500	20	2
501 and above	32	3

## A-2. Number of Tests and Criteria for Conformity

**A-2.1** The setting iron selected according to A-1.2 shall be examined for material (see 2), dimensions (see 3) and general requirements (see 4). Any setting iron failing to meet the requirements for any one or more of the characteristics mentioned above shall be declared defective.

**A-2.1.1** The lot shall be considered conforming to the requirements of the characteristics mentioned in A-2.1, if the number of setting iron found defective is less than or equal to the corresponding number given in col 3 of Table 1.

## EXPLANATORY NOTE

Setting irons are used to bend the upper part of every alternate cutting tooth to the opposite sides. Setting is done in order to prevent the saw from binding or running heavily. By setting, the saw kerf is made little wider than the thickness of blade to reduce the saw friction.

In the preparation of this standard, assistance has been derived from the Logging Development Division, Forest Research Institute and Colleges, Dehra Dun.